



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/774,768	01/31/2001	Dror Segal	32941 070591.0135	5534
21003	7590	04/16/2009		
BAKER BOTTS L.L.P. 30 ROCKEFELLER PLAZA 44TH FLOOR NEW YORK, NY 10112-4498			EXAMINER ROSEN, ELIZABETH H	
			ART UNIT	PAPER NUMBER
			3692	
			NOTIFICATION DATE	DELIVERY MODE
			04/16/2009 ELECTRONIC	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DLNYDOCKET@BAKERBOTTS.COM



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents  
United States Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 09/774,768  
Filing Date: January 31, 2001  
Appellant(s): SEGAL ET AL.

\_\_\_\_\_  
Jack L. Chen (Reg. No. 48,634)  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed on September 2, 2008 appealing from the Office action mailed on January 29, 2008.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

### **(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

### **(8) Evidence Relied Upon**

Schmerken, Ivy "Real Liffe or Virtual Reality" Wall Street & Technology, Vol. 15, Iss. 1 (Jan 1997), p. 70.

Tomasula, Dean "Virtual Trading is Virtually a Reality" Wall Street & Technology, Vol. 13, Iss. 10 (Oct. 1995), p. 44.

5,675,746

Marshall

10-1997

### **(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

#### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1-7, 11-17 and 23** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Schmerken** (Ivy Schmerken. "Real Liffe or virtual reality." Wall Street & Technology. New York: Jan 1997. Vol 15, Iss. 1; pg 70, 3 pages) in view of **Tomasula** (Dean Tomasula. "Virtual trading is virtually a reality." Wall Street & Technology. New York: Oct 1995. Vol.13, Iss. 10; pg 44, 3 pgs).

**Claim 1:**

**Schmerken** discloses the limitations of:

- *maintaining data representing a three dimensional model of said exchange trading areas, said model including surfaces* (Page 2, paragraph 2; also see photograph at end of article).

**Schmerken** does not disclose, but **Tomasula**, however, does disclose:

- *providing an interactive decision support interface coupled to the visual display of trading exchange activity* (Page 3, '6th paragraph');
  - *receiving and maintaining in a computer memory data representing exchange activity* (page 2, paragraph 2 "Trader Interaction."); and
  - *generating a two-dimensional display representing an aspect view of said three dimensional model selected via the interactive decision support interface, said two dimensional display including perspective views of at least some of said surfaces of said models* (Page 2, paragraph 10 "Flat reality.").

It would have been obvious to anyone of ordinary skill in the art at the time of invention to include the teachings of Tomasula to the disclosure of Schmerken so that a participant in the virtual reality system would not need to wear a "space suit, goggles and gloves and be connected by a spider web of wires." This function of virtual reality is cumbersome and expensive and simply representing 3D images on a computer screen is much more simple and efficient.

**Schmerken** does not explicitly disclose:

- *generating alphanumeric images of selected data representing trading exchange activity*; and
- *mapping said alphanumeric images onto selected ones of said perspective views.*

However it was notoriously well known in the art at the time of invention for trading floors to utilize alphanumeric images such as stock symbols and pricing information across a ticker board. Therefore it would have been obvious to anyone skilled in the ordinary art at the time of invention to map these "real" images from a trading floor onto the virtual trading floor disclosed by Schmerken in view of Tomasula. One would be motivated to do this in order to reflect, as accurately as possible in a virtual world, the conditions of the real world environment. Furthermore, on any trading floor platform it is vital that traders have access to price quotes and other financial information, and therefore any method seeking to simulate a trading floor would be better served to provide this information.

**Schmerken** does not explicitly disclose:

- *at a centralized location, providing a visual display of trading exchange activity including systems activity and trading activity to a trading exchange supervisor or manager.*

However, it would be obvious to a person having ordinary skill in the art at the time of the invention that a supervisor or manager of the system would be essential to the invention because in order to have a virtual trading system, either a person or company would have to oversee the use of the system. Furthermore, it would be obvious that the manager or supervisor would oversee the system by viewing the activity.

**Claim 2:**

Schmerken/Tomasula discloses the limitations as described above.

**Schmerken** further discloses:

- *changing said selected aspect view of said three dimensional model (page 2 paragraph 2 "move around and enter the levels of the pit. By swinging your head you can even view the ceiling and walls.").*

**Schmerken** does not explicitly disclose, but **Tomasula** does disclose:

- *generating a further two dimensional display representing said changed aspect view, said further two dimensional display including further perspective views of at least some of said surfaces of said model; and*
- *mapping said alphanumeric images onto selected ones of said further perspective views in said further two dimensional display.*

As was discussed in the rejection of claim 1, Tomasula discloses the use of a computer screen to display 3-D virtual reality images and it would have been obvious then, that if the three-dimensional aspect view changed to have the two dimensional aspect view change as well. If this were not the case than the computer screen would essentially show a static snapshot image, not a dynamic environment, which is the intention of virtual reality. The same argument holds for the alphanumeric images, such as a ticker displaying financial information. To be effective, a ticker cannot be a static shot since financial information changes instantaneously. Therefore it would have been obvious to map these images onto said further perspective views to more fully mimic the real trading floor environment.

**Claim 3:**

Schmerken/Tomasula discloses the limitations as described above.

**Schmerken** does not explicitly disclose:

- *wherein portions of said two dimensional display are selectable, said selectable display portions being operable when selected for displaying further data correlated to said selectable display portions.*

However it was well known in the art to be able to select portions of a display on a computer screen to display further correlated data. For

instance, Schmerken discloses the users can turn on videos and monitors (Page 2, paragraph 2). It would be obvious then to allow users to select these portions, such as a video monitor of the floor, and "zoom in" on this video monitor to view the corresponding data. Again video monitors with financial data and information are prevalent on a trading floor and therefore it would be obvious to include this information on any virtual representation of said floor in order to render the environment as accurately as possible.

**Claim 4:**

Schmerken/Tomasula discloses the limitations as described above.

**Schmerken** does not explicitly disclose:

- *wherein at least some of said selectable display portions comprise said perspective aspect views, and wherein said further data is correlated to data represented by said alphanumeric images mapped onto said perspective aspect views.*

However as was discussed in the rejection of claim 3, Schmerken discloses that a user can select a monitor on the trading room floor to either turn on or off or move (page 2, paragraph 3). It is well known in the art that these monitors on trading floors contain alphanumeric images relating to financial information, such as stock symbols and stock quotes. Therefore it would have been obvious to anyone of ordinary skill in the art at the time of invention to map said alphanumeric images onto the perspective aspect view (view of the monitor screen) in order to virtually reflect in accurate detail, the conditions of a real trading floor.

**Claim 5:**

**Schmerken** discloses the limitations of:

- *maintaining data representing a three-dimensional model of said exchange trading area, said model including model portions*



*representing said trading posts* (Page 2 paragraph 2; also see photograph at end of article).

**Schmerken** does not disclose, but **Tomasula**, however, does disclose:

- *providing an interactive decision support interface coupled to the visual display of trading exchange activity* (Page 3, '6<sup>th</sup> paragraph').

It was well known in the art for a trading area to include trading posts where particular securities are bought and sold. For instance the New York Stock Exchange has 17 such trading posts. Therefore it would have been obvious to anyone of ordinary skill in the art at the time of invention to include, in a virtual reality rendering of a trading area, such trading posts for the sake of accuracy in the model. The purpose of a virtual reality is to graphically model, as accurately as possible, the conditions of particular environment. Without including trading posts in the modeling of a trading area, the model would be incomplete.

**Schmerken** does not disclose, but **Tomasula**, however, does disclose:

- *receiving and maintaining in a computer memory data representing trading of said securities* (Page 2, paragraph 4 "Interact with his fellow traders as if they were all on the same floor."); and
- *generating a two dimensional display representing an aspect view of said three dimensional model selected via the interactive decision support interface, said selected aspect view including one or more of said model portions representing said trading posts* (Page 2, Paragraph 10; two dimensional display would include all aspects of 3-D rendering of a trading area, including the trading posts).

It would have been obvious to anyone of ordinary skill in the art at the time of invention to include the teachings of Tomasula to the disclosure of Schmerken so that a participant in the virtual reality system would not

need to wear a "space suit, goggles and gloves and be connected by a spider web of wires." This function of virtual reality is cumbersome and expensive and simply representing 3D images on a computer screen is much more simple and efficient.

**Schmerken** does not explicitly disclose:

- *said model portions having selectable parts being selectable and operative when selected to display further data from said computer memory correlated to said selected parts.*

However Schmerken does disclose certain model portions, such as videos and monitors, which are selectable by a user in order to display further data ("turn on the videos."). It was well known in the art at the time of invention for trading posts in a trading area to include such videos and monitors so that persons on a trading floor are provided with a continuous stream of information related to the corresponding security or market. Therefore it would have been obvious to anyone of ordinary skill to include this feature to the disclosure of Schmerken in view of Tomasula to allow a user to essentially zoom in on a particular monitor or screen in order to view further information associated with a particular trading post. In the virtual reality world, this would be the same as a trader simply viewing a particular monitor on the actual trading floor and would further enhance the virtual experience of the user.

**Schmerken** does not explicitly disclose:

- *at a centralized location, providing a visual display of trading exchange activity including systems activity and trading activity to a trading exchange supervisor or manager.*

However, it would be obvious to a person having ordinary skill in the art at the time of the invention that a supervisor or manager of the system would be essential to the invention because in order to have a virtual trading

system, either a person or company would have to oversee the use of the system. Furthermore, it would be obvious that the manager or supervisor would oversee the system by viewing the activity.

**Claim 6:**

Schmerken/Tomasula discloses the limitations as described above.

**Schmerken** does not explicitly disclose:

- *generating alphanumeric images relating to securities traded at a selected trading post and mapping said alphanumeric images into selected ones of said surfaces in said two-dimensional display, and wherein said surfaces being operative when selected to display further data correlated to said related securities.*

However, as was discussed in claim 5 above, Schmerken discloses that a user in a virtual reality world can turn on video monitors that exist on the trading floor. Furthermore it was notoriously well known in the art at the time of invention for these video monitors to show alphanumeric images including stock symbols and price quotes. Therefore it would have been obvious to anyone of ordinary skill to map such alphanumeric images onto the surfaces of the virtual reality world because the goal on any virtual reality world is to mirror, with as much accuracy as possible, the "real" world. On a real trading floor these monitors show alphanumeric images, therefore in the virtual world, the monitors should display the same images. Furthermore, as Schmerken discloses, these monitors can be turned on and off in the virtual reality world, and are therefore "selectable" to display the further information on the surface of the monitor.

**Claim 7:**

Schmerken/Tomasula discloses the limitations as described above.

**Schmerken** does not explicitly disclose:

- *wherein said alphanumeric images comprise identification of said securities.*

As was discussed in claim 6 it was well known in the art that the monitors such as the ones disclosed by Schmerken (page 2, paragraph 2) display information such as a particular stock symbol and price quotes. Therefore it would have been obvious to include this step to the disclosure of Schmerken in view of Tomasula so that a user on the virtual trading floor will know the security that is associated with a particular trading post.

**Claims 11-17:**

Further system claims would have been obvious in order to perform the previously rejected method claims 1-7, respectively, and are therefore rejected using the same art and rationale.

**Claim 23:**

Schmerken/Tomasula discloses the limitations as described above.

**Schmerken** does not explicitly disclose:

- *using the interactive decision support interface for at least one of: ensuring and enforcing compliance with the trading exchange's financial and operational requirements; checking brokers' sales practices; and monitoring specialist operations.*

Official Notice is taken that it was old and well known at the time of invention for exchange managers to perform regulatory functions regarding the trading activities of participants. It would have been obvious to a person of ordinary skill in the art to include these regulatory features to the virtual reality display and interface so that all entities and function that exist in a live trading forum exist in the virtual reality as well.

3. **Claims 8-10 and 18-22** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Schmerken** (Ivy Schmerken. "Real Liffe or virtual reality." Wall Street & Technology. New York: Jan 1997. Vol 15, Iss. 1; pg 70, 3 pages) in view of **Tomasula** (Dean Tomasula. "Virtual trading is virtually a reality." Wall Street & Technology. New York: Oct 1995. Vol.13, Iss. 10; pg 44, 3 pgs), and further in view of **Marshall**, U.S. Patent Number 5,675,746.

**Claim 8:**

Schmerken/Tomasula discloses the limitations as described above.

**Schmerken** does not disclose, but **Marshall**, however, does disclose:

- *analyzing said data representing trading of said securities and identifying exceptional conditions relating thereto, generating image portions representing said exceptional conditions, and displaying said exceptional condition image portions in said two-dimensional display in correlation with display of model portions representing said trading posts at which said securities are traded* (Marshall discloses a virtual generator for use with financial information, wherein abstract financial information is represented by real world objects (metaphors) as part of the virtual reality world (Column 3, lines 35-63). Furthermore the method of Marshall allows the user to enter "exceptional" conditions, upon which the metaphors will be displayed.).

It would have been obvious to anyone of ordinary skill in the art at the time of invention to include the teaching of Marshall to the disclosure of Schmerken in view of Tomasula, so that a user viewing a display can be alerted to a particular trend or sequence of events that has been defined as important. These alerts, in the form of images quickly and efficiently inform the user of important events and allow them to certain actions. Furthermore it would be obvious to display the corresponding images at the relevant trading post of the displayed trading area, which would

provide the user with information as to the specific security to which the metaphor pertains.

**Claim 9:**

Schmerken/Tomasula discloses the limitations as described above.

**Schmerken** does not disclose, but **Marshall**, however, does disclose:

- *wherein said exceptional condition image portions are selectable and operative when selected to display further data concerning said exceptional condition* (Column 4, lines 44-47).

It would have been obvious to anyone of ordinary skill in the art at the time of invention to include the teaching of Marshall to the disclosure of Schmerken in view of Tomasula, so that a user viewing a display can be alerted to a particular trend or sequence of events that has been defined as important. These alerts, in the form of images quickly and efficiently inform the user of important events and allow them to certain actions. Furthermore it would be obvious to display the corresponding images at the relevant trading post of the displayed trading area, which would provide the user with information as to the specific security to which the metaphor pertains.

**Claim 10:**

Schmerken/Tomasula discloses the limitations as described above.

**Schmerken** does not disclose, but **Marshall**, however, does disclose:

- *monitoring data processing systems used in said exchange* (Column 4, lines 28-33);
- *identifying exceptional conditions in said data processing systems and the locations of said exchange effected by said exceptional conditions* (Column 4, lines 39-41); and

- *generating image portions representing conditions of said data processing systems and displaying said exceptional condition image portions in said two dimensional display* (Column 4, lines 41-47).

It would have been obvious to anyone of ordinary skill in the art at the time of invention to include the teaching of Marshall to the disclosure of Schmerken in view of Tomasula, so that a user viewing a display can be alerted to a particular trend or sequence of events that has been defined as important. These alerts, in the form of images quickly and efficiently inform the user of important events and allow them to certain actions.

**Schmerken** does not explicitly disclose:

- wherein these images are shown in correlation with the location of the exchange where the exceptional condition is happening.

However, as has been discussed previously it is well known in the art for a trading floor to have trading posts where particular securities are traded. Therefore it would be obvious to place an alert about a particular security, at that particular securities trading post so that a user of the system can quickly determine location of the "exceptional condition," and move to that area to take action.

**Claims 18-20:**

Further system claims would have been obvious in order to perform the previously rejected method claims 8-10, respectively, and are therefore rejected using the same art and rationale.

**Claim 21:**

Schmerken/Tomasula discloses the limitations as described above.

**Schmerken** does not disclose, but **Marshall**, however, does disclose:

- *wherein the computer system is further configured and programmed to receive and maintain in a computer memory real time and historical data integrated from several sources representing trading of said securities* (Column 4, lines 29-33).

It would be obvious to a person having ordinary skill in the art at the time of the invention to combine this feature with the invention of Schmerken/Tomasula for the purpose of maintaining financial information that is accurate and as current as possible.

**Claim 22:**

Schmerken/Tomasula discloses the limitations as described above.

**Schmerken** does not disclose, but **Marshall**, however, does disclose:

- *the computer system is further configured and programmed to receive and maintain in a computer memory real time and historical data integrated from several sources representing trading of said securities* (Column 4, lines 29-33).

It would be obvious to a person having ordinary skill in the art at the time of the invention to combine this feature with the invention of Schmerken/Tomasula for the purpose of maintaining financial information that is accurate and as current as possible.

**Schmerken** does not explicitly disclose:

- *normalized market data.*

However the step of normalizing market data is notoriously well known in the art as a statistical adjustment for cyclical ups and downs in the economy. Therefore it would have been obvious to anyone of ordinary skill to include to normalized data to the system of Schmerken in view of Tomasula in view of Marshall so that the system is provided with typical financial statistics from which decisions and actions can be made.



### (10) Response to Argument

The following is a table of all the limitations in claim 1 and where these limitations are found in the references. Further explanations of limitations discussed in Appellant's brief follow this table.

Claim 1		
CLAIM LIMITATIONS	SCHMERKEN	TOMASULA
<i>at a centralized location, providing a visual display of trading exchange activity including systems activity and trading activity to a trading exchange supervisor or manager</i>		Traders in remote locations can be integrated by audio, video, and data communications. There is a constant flow of information that is managed at a central location (or back room). (see at least Pages 2 and 3).
<i>providing an interactive decision support interface coupled to the visual display of trading exchange activity</i>		Remote traders are integrated into a virtual trading floor with video and audio conferencing. Furthermore, Tomasula discloses several types of virtual reality, including flat reality, which is a virtual reality that is delivered on a computer screen. (Refer to arguments for explanation of how this limitation was interpreted.).
<i>maintaining data representing a three dimensional model of said exchange trading areas, said model including surfaces</i>	By turning on the videos and moving the monitors, someone can virtually enter a trading pit. (see at least Page 2, Paragraph 2). Also, the photograph on Page 3 illustrates Liffe's virtually populated trading pit.	
<i>receiving and maintaining in a computer memory data representing exchange activity</i>		Traders in remote locations can virtually trade as if they are actually located on a trading floor. This is a virtual trading floor. (see at least Page 2).
<i>generating a two-dimensional display representing an aspect view of said three dimensional model selected via the interactive decision support interface, said two dimensional display including perspective views of at least some of said surfaces of said models</i>		Flat reality is a type of virtual reality "where the virtual reality is delivered on a computer screen." (see at least Page 2, Paragraph 10).

Claim 1		
CLAIM LIMITATIONS	SCHMERKEN	TOMASULA
<i>generating alphanumeric images of selected data representing trading exchange activity</i>		Tomasula discloses a virtual trading floor where traders can trade remotely. Alphanumeric images such as stock symbols and pricing information are an essential part of any type of trading including virtual trading.
<i>mapping said alphanumeric images onto selected ones of said perspective views</i>		Tomasula discloses a virtual trading floor where traders can trade remotely. Alphanumeric images such as stock symbols and pricing information are an essential part of any type of trading including virtual trading. For the traders to be able to use the virtual trading floor, they would have to be able to view the stock symbols and pricing information.

**(10A) Appellant's Argument that "THE PREAMBLE OF CLAIMS 1 and 11 SHOULD BE ACCORDED PATENTABLE WEIGHT."**

Appellant argues that the preamble of claims 1 and 11 should be given patentable weight. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Claim 1 includes the preamble of "A method for managing trading and system activity in a trading exchange." The "managing of trading and system activity in a trading exchange" is intended use or purpose. Furthermore, the body of the claim does not depend on the preamble. Rather, the body of the claim lists several steps which have been examined. Although the body of the claim discusses "system activity" and "trading

activity," nowhere in the claim is there any mention of managing this activity. A similar argument applies to claim 11.

**(10B) Appellant's Argument that "THE EXAMINER IMPROPERLY COMBINES SCHMERKEN AND TOMASULA BECAUSE SCHMERKEN EXPLICITLY TEACHES AWAY FROM TOMASULA."**

Appellant argues that Schmerken explicitly teaches away from Tomasula because the article states, in an interview of a Liffe employee, that the company does not intend to use the technology for trading. However, the paragraph that follows (i.e., the last paragraph of Page 2 of Schmerken) states a quote by another employee of Liffe: "Liffe's just going to grips with where they can take it,' adding that it's highly experimental. Despite this cautionary tone, the future of virtual trading could be around the corner. 'It's just getting the applications right and getting people to realize what you can do, and Liffe's helping us.'" Therefore, it is clear that using the technology for virtual trading was contemplated by the company and obvious to the interviewer.

**(10C) Appellant's Argument that "SCHMERKEN AND TOMASULA FAIL TO TEACH OR SUGGEST 'A METHOD FOR MANAGING TRADING AND SYSTEM ACTIVITY IN A TRADING EXCHANGE' AS REQUIRED BY CLAIM 1."**

Appellant argues that "A method for managing trading and system activity in a trading exchange" is not taught or disclosed in Schmerken and Tomasula. As previously

explained, the preamble is not given patentable weight and therefore does not have to be disclosed in the references. However, the preamble is obvious based on the combination of Schmerken and Tomasula and disclosed in these references for the same reasons as are addressed in the following section (10D).

**(10D) Appellant's Argument that "SCHMERKEN AND TOMASULA FAIL TO TEACH OR SUGGEST 'AT A CENTRALIZED LOCATION, PROVIDING A VISUAL DISPLAY OF TRADING EXCHANGE ACTIVITY INCLUDING SYSTEMS ACTIVITY AND TRADING ACTIVITY TO A TRADING EXCHANGE SUPERVISOR OR MANAGER' AS REQUIRED BY CLAIM 1."**

Appellant argues that the limitation of "at a centralized location, providing a visual display of trading exchange activity including systems activity and trading activity to a trading exchange supervisor or manager" is not taught or suggested by Tomasula and Schmerken. Tomasula discloses, on Page 2, that "[t]he virtual trading floor of the future will integrate a group of traders by audio, video and data communications into a single unit. Each trader can be located in a different city and still interact with his fellow trader as if they were all on the same floor." Tomasula further discloses, on Page 2, that "[b]esides the hardware traders need to conduct business – including turrets, speakers and data terminals – they need a constant flow of information. Traders also require interaction with other traders, either through direct conversation or simply by a reaction to something that happens on the floor." On Page 3, Tomasula explains that there can be between five and ten traders per ATM box, a server would be used to feed the video

to the traders, and there would be a back room that would include redundant feeds for backup purposes. It is clear in Tomasula that there is a centralized location (or back room) that maintains the ATM box and server. At this centralized location, trading activity and systems activity are managed. This management is essential in order to integrate the group of traders and maintain the constant flow of information so that the traders are able to properly interact.

Additionally, in the Background of the Invention, Appellant explains the well known importance of managing trading and system activity. The following is Paragraph 0003 from the Background of the Invention for the instant application:

"[0003] In connection with managing operations of a trading market, such as the New York Stock Exchange®, it is important for management personnel to be aware of exceptional events relating to business activity. Exceptional events include unusual trading activity in a particular security, or unusual systems activity such as overload of system components or component failures. In addition, exchange manager, compliance officers, security traders and analysts have a need for quick and easy access to the enormous volume of data which characterize various aspects of the financial market, such as the real time price and volume of a traded security, as well as outstanding booked orders."

In the Background of the Invention, the Appellant acknowledged the need for the management of systems activity and trading activity in order to identify unusual trading activity or unusual systems activity that could compromise the trading. Therefore, it

would have been obvious that the virtual trading system must be managed in order for it to be properly operated.

**(10E) Appellant's Argument that "SCHMERKEN AND TOMASULA FAIL TO TEACH OR SUGGEST 'PROVIDING AN INTERACTIVE DECISION SUPPORT INTERFACE COUPLED TO THE VISUAL DISPLAY OF TRADING EXCHANGE ACTIVITY' AS REQUIRED BY CLAIM 1."**

Appellant argues that "providing an interactive decision support interface coupled to the visual display of trading exchange activity" is not taught or suggested by Schmerken and Tomasula. With regard to the "interactive decision support interface," there is a lack of support for this feature in the specification. In fact, there is no mention of an interface in the specification. Paragraph 0031 of the Appellant's published specification states that "[t]he interactive decision support system 101 can provide graphical representation of real time data on at least one display monitor 107 which can be located remotely or in an exchange control room located adjacent the actual trading floor of the NYSE." Paragraph 0036 of the Appellant's published specification states that "[t]he interactive decision support system 101 of the present invention utilizes a computerized three dimensional model of the stock exchange trading floor to provide a vehicle for efficient display of real time data and visualization of all components of a virtual trading floor 201." It appears, from this disclosure, that the "interactive decision support interface" can be a computer with a display/monitor that is capable of displaying a stock exchange trading floor. Tomasula discloses this limitation because in Tomasula, remote traders are integrated into a virtual trading floor with video and audio

conferencing. Furthermore, Tomasula discloses several types of virtual reality, including flat reality, which is a virtual reality that is delivered on a computer screen.

Additionally, this limitation is broad and does not include more than "an interactive decision support interface coupled to the visual display of trading exchange activity." There is no indication of how the interactive decision support interface is used or what it comprises. Appellant argues that "[n]othing in Tomasula allows an operator to pinpoint complex systems and stock related activity." However, this feature is not a limitation in claim 1 and it would be improper to read this feature into claim 1 when it is not part of the claim. Therefore, the claimed limitation is properly construed as a computer that is capable of displaying a three dimensional model or a stock exchange trading floor.

However, even if, as Appellant suggests, the feature of an operator pinpointing complex systems and stock related activity is read into claim 1, it is disclosed in the combination of Schmerken and Tomasula. As explained in the previous section (10D), Tomasula discloses a centralized location (or back room) that maintains the ATM box and server. At this location, trading activity and systems activity are managed. It would be obvious that in order to maintain the constant flow of information that is described in Tomasula, it would be essential to have an operator manage the system and trading activity.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Elizabeth Rosen/

Examiner, Art Unit 3692

/Alexander Kalinowski/

Supervisory Patent Examiner, Art Unit 3691

Conferees:

/A. K./

Supervisory Patent Examiner, Art Unit 3691

Vincent Millin /vm/  
Appeals Conference Specialist